Patent Claims

1. Apparatus (1) for the treatment of substrates (31), especially semiconductor wafers, with a first process container (2) that has at least one opening (29), whereby the opening (29) can be closed by the substrate (31) from the outside, characterized by a second process container (60) that is provided adjacent to the process container (2), wherein one wall (9) of the second process container is at least partially that container wall (9) of the first process container (2) that contains the opening, whereby the opening (29) can be closed from the direction of the first process container.

2. Apparatus (1) according to claim 1, characterized in that the opening (29) is formed in an essentially vertical wall (9) of the process container (2).

3. Apparatus (1) according to one of the preceding claims, characterized by a sealing element (32) that forms the periphery of the opening (29), wherein the sealing element in particular has an undercut (35) in the sealing lip that is formed in particular by milling out a sealing material that forms the sealing element (32).

4. Apparatus (1) according to one of the preceding claims,

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characterized by a contact element (37) for the electrical contacting of that surface (40) of the substrate (31) that faces the process container (2), wherein the contact element in particular extends into the region of the undercut (35) of the sealing element (32).

5. Apparatus (1) according to one of the preceding claims, characterized by an electrode (20) that is disposed across from the opening (29) and that in particular is an electrode plate (20) and has openings (74) allowing at least one fluid to pass through and that is in particular an anode.

6. Apparatus (1) according to claim 5, characterized in that the electrode (20) can be moved toward and away from the opening (29), and in particular the opening (29) can be closed off by the electrode (20) from the direction of the first process container.

7. Apparatus (1) according to claim 6, characterized by at least one sealing element (25) on the electrode (20) and/or on a container wall (9) that surrounds the opening (29), wherein the sealing element in particular radially surrounds the electrode and extends axially beyond a surface that faces the opening (29).

8. Apparatus (1) according to one of the preceding claims,

characterized in that at least one treatment fluid that can be introduced into the process container (2) is a metal-containing electrolyte and/or an etching medium.

9. Apparatus (1) according to one of the preceding claims, characterized in that the second process container (60) forms a rinsing and/or drying chamber and/or a surface-conditioning chamber.

10. Apparatus (1) according to one of the preceding claims, characterized by a substrate holder (4) having at least one vacuum finger (44) that is moveable relative to a main body (42) of the substrate holder (4) and that in particular is disposed centrally in a surface of the main body (42) that faces the substrate (31) and in particular is recessible in the main body (42) of the substrate holder (4).

11. Apparatus (1) according to claim 10, characterized by a pressure sensor in a vacuum line (45) that is connected with the vacuum finger (44).

12. Apparatus (1) according to one of the claims 10 or 11, characterized by a plurality of fixed vacuum openings (47) in that surface of the main body (42) of the substrate holder (4) that faces the substrate (31), wherein the vacuum openings in particular radially surround the vacuum finger (44) and in

particular can be supplied with vacuum separately from the vacuum finger (44).

13. Apparatus (1) according to one of the claims 10 to 12, characterized by at least one sealing element (51) on the substrate holder (4) that radially surrounds the vacuum openings (47), that is in particular elastic, and that is disposed across from the sealing element (32) on the periphery of the opening (29), in particular the sealing lip.